CONTRIBUTION OF NEOADJUVANT CHEMORADIOTHERAPY WITH S-1/ IRINOTECAN TO MINIMALLY INVASIVE TREATMENT FOR ADVANCED RECTAL CANCER

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Abstract

Introduction: We had performed Neoadjuvant chemoradio therapy (NCRT) and laparoscopic surgery for local advanced rectal cancer for the purpose of further good prognosis and minimally invasive treatment.

Aim: To assess the long-term outcome of patients with rectal cancer who received neoadjuvant chemoradio therapy with S-1 and Irinotecan.

Patients and Method: From 2004 to 2010, 115 patients with clinical stage T3 or T4 rectal cancer received pelvic radiation therapy (45 Gy) plus concurrent S-1 (80mg/m2)/irinotecan (80mg/m2). After 8-10 weeks, we performed open surgery of TME and dissection of bilateral lymph nodes. After 2011, 107 patients without lateral lymph node metastasis received NCRT with expanded radiation field to lateral lymph node region and reduced dose of irinotecan (60mg/m2). And we performed laparoscopic TME after NCRT. Through the entire period, 20 patients with a clinical complete response (cCR) after NCRT, who had poor general condition or refused to receive operation, management by watch-and-wait approach emerged as a treatment option.

Result: In the early regimen, 24% of patients had a pathological complete response (ypCR). The local recurrence-free survival (LFS) was 93%, disease-free survival (DFS) was 79%, and overall survival (OS) was 80%. In the current regimen, ypCR rate was 20.6%, LFS was 92.5%, DFS was 72.0% and OS was 84.5%. In the both regimen, patients with histological response grade3 had good prognosis (DFS=96.9% in the early regimen and 100% in the current regimen). There were no significant difference according to short-term outcome between open and laparoscopic surgery after NCRT. In the patients who received watch-and-wait approach, there were 2 cases received additional CRT, and one case of additional chemotherapy. Recurrence rate was 20.0% (4 patients), and all of these patients received laparoscopic /robotic salvage surgery within 2 months after recurrence. DFS was 82.3% and OS was 100% in watch and wait approach group.

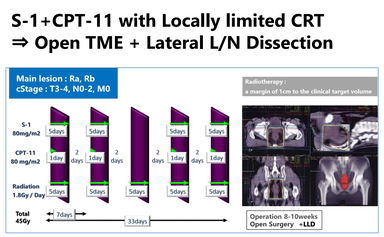
Conclusion: NCRT with S-1/irinotecan produced excellent long-term survival outcomes in patients with rectal cancer, and combination with laparoscopic /robotic surgery will provide low invasive treatment.

Background

Treatment strategy for advanced rectal cancer in Kitasato Univ.

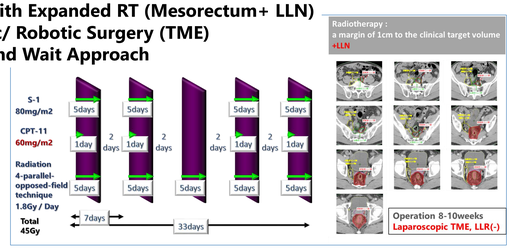
2004~2010

S-1+CPT-11 with Locally limited CRT
⇒ Open TME + Lateral L/N Dissection



2011~

S-1+CPT-11 with Expanded RT (Mesorectum+ LLN)
⇒ Laproscopic/ Robotic Surgery (TME)
or Watch and Wait Approach



Results of NCRT (S-1+CPT-11 with Expanded RT) and Laproscopic/ Robotic Surgery

Patient Characteristics (n=107)

Age		65 (37-85)
Gender	F	40
	M	67
ASA	1	52
	2	48
	3	6
Location	Ra	6
	Rab	7
	Rb	93
	Rbp	1
cT	2	5
	3	81
	4a	12
	4b	5
cN	0	60
	1	39
	2	4
	3	3

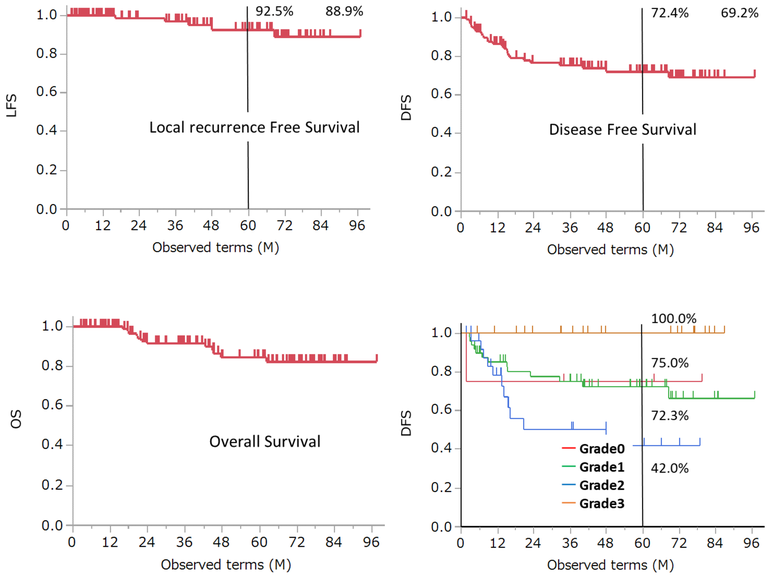
Short term outcomes of Lap/Robotic Surgery after NCRT

Operative method	
LAR	54
ISR	2
Hartmann	1
APR	50
Operative time (min)	328 (135-732)
Blood Loss (ml)	80 (5-1465)
Postoperative stay (days)	13 (7-33)

Early Complication	n	%
SSI	13	12.1
Leakage	9	8.4
Obstruction	4	3.7
Dysurea	4	3.7
Enteritis	3	2.8

Late Complication	n	%
Rectovaginal fostula	1	0.9

Long term outcomes of NCRT (2)



Long term outcomes (1)

Histological Grade	n	%	Recurrence
0	4	37.4	1 (25%)
I	52	48.6	16 (30.8%)
II	28	26.2	11(39.3&)
III (pCR)	23	21.5	0 (0.0%)

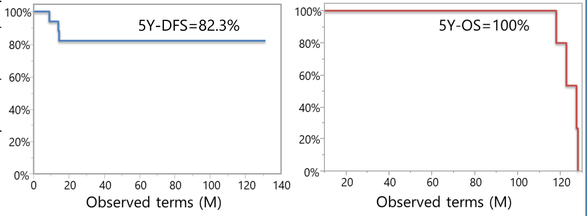
Recurrence site	n	%
Lung	10	9.3
Liver	8	7.5
Local	6	5.6
Para aortic L/N	3	2.8
Bone	1	0.9

Results of Watch and Wait Approach

Patient Characteristics (n=19)

Age	Mean	70 (55-79)
Gender	Male	10
	Female	9
CRT	Complete	14
	Incomplete	5
cT	2	1
	3	16
	4a	1
	4b	1
cN	0	14
	1	3
	2	0
	3	2
Additional treatment	CRT	2
	Chemo	1
Recurrence	(-)	15
	(+)	4

Long term outcomes of W&W approach



Salvage surgery

Gender	Age	OPE	DFS (M)	Time after Rec. to OPE (M)	pT	pN
F	67	LAP－APR	12.8	1.6	3	0
F	63	LAP－APR	7.5	2.3	4b	0
M	62	RALS－LAR	13.3	1.5	3	0
M	67	LAP-APR	7.6	1.9	4a	0
Mean			12.8 (7.5-13.3)	1.6 (1.5-2.3)		

Short term outcomes of salvage surgery

	Salvage surgery n=4	Surgery after NCRT n=107
Operation time (min)	298 (255-354)	328 (135-732)
Blood loss (ml)	270 (200-450)	80 (5-1465)
Postoperative stay (days)	9 (7-12)	13 (7-33)
Complication (C-D≧II)	0 (0.0%)	33 (30.8%)